London Borough of Hounslow Air Quality Annual Status Report for 2024

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This report provides a detailed overview of air quality in London Borough of Hounslow during 2024. It has been produced to meet the requirements of the London Local Air Quality Management (LLAQM) statutory process[1].

Contact details:

Julian Newman, Environmental Strategy Officer

E: julian.newman@hounslow.gov.uk

[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19))

Contents

Tables

Figures

Abbreviations

Abbreviation	Description
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQN	Air Quality Neutral
AQO	Air Quality Objective
AQP	Air Quality Positive
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
PM_{10}	Particulate matter less than 10 micron in diameter
$PM_{2.5}$	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

Table A. Summary of National Air Quality and International Standards, Objectives and Guidelines

Pollutant	Standard / Objective / Guideline	Averaging Period	Date[1]
Nitrogen dioxide (NO_2)	200 µg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
Nitrogen dioxide (NO_2)	40 µg m^{-3}	Annual mean	31 Dec 2005
Nitrogen dioxide (NO_2)	WHO AQG[2]: 10 µg m^{-3}	Annual mean	
Particles (PM_{10})	50 µg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
Particles (PM_{10})	WHO AQG[2]: 45 µg m^{-3} not to be exceeded more than 3-4 times a year	24-hour mean	
Particles (PM_{10})	40 µg m^{-3}	Annual mean	31 Dec 2004
Particles (PM_{10})	WHO AQG[2]: 15 µg m^{-3}	Annual mean	
Particles ($PM_{2.5}$)	20 µg m^{-3}	Annual mean	2020
Particles ($PM_{2.5}$)	London Mayoral Objective[3]: 10 µg m^{-3}	Annual mean	2030
Particles ($PM_{2.5}$)	WHO AQG[2]: 5 µg m^{-3}	Annual mean	
Particles ($PM_{2.5}$)	Target of 15% reduction in concentration at urban background locations	3-year mean	Between 2010 and 2021
Particles ($PM_{2.5}$)	WHO AQG[2]: 15 µg m^{-3}	24-hour mean	
Sulphur dioxide (SO_2)	266 µg m^{-3} not to be exceeded more than 35 times a year	15-minute mean	31 Dec 2005
Sulphur dioxide (SO_2)	350 µg m^{-3} not to be exceeded more than 24 times a year	1-hour mean	31 Dec 2004
Sulphur dioxide (SO_2)	125 µg m^{-3} mot to be exceeded more than 3 times a year	24-hour mean	31 Dec 2004
Sulphur dioxide (SO_2)	WHO AQG[2]: 40 µg m^{-3} not to be exceeded more than 3-4 times a year	24-hour mean	

Notes:

(1) Date by which to be achieved by and maintained thereafter

(2) 2021 World Health Organisation Air Quality Guidelines

(3) London Mayoral Objective

1. Air Quality Monitoring

1.1 Locations

Table B. Details of Automatic Monitoring Sites for 2024

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
HS4	Chiswick	Roadside	521084	178499	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	1	4	3
HS5	Brentford	Roadside	517425	178071	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	1	2	3
HS6	Heston	Roadside	513655	176842	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	1	1.5	1.5
HS7	Hatton Cross	Urban Background	509334	174997	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	10	11.5	2
HS8	Gunnersbury	Roadside	519180	179338	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	2	9	2
HS9	Feltham	Roadside	510691	173247	NO_2, PM_{10}, $PM_{2.5}$	Yes	Hounslow	Chemiluminescent TEOM FDMS	1	3	1.5

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable

Table C. Details of Non-Automatic Monitoring Sites for 2024

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
BREN A	Brentford, Great West Road	Roadside	517425	178071	NO_2	Y	1	4	Y	3
BREN B	Brentford, Great West Road	Roadside	517425	178071	NO_2	Y	1	4	Y	3
BREN C	Brentford, Great West Road	Roadside	517425	178071	NO_2	Y	1	4	Y	3
CHIS A	Chiswick High Road	Roadside	521084	178499	NO_2	Y	1	2	Y	3
CHIS B	Chiswick High Road	Roadside	521084	178499	NO_2	Y	1	2	Y	3
CHIS C	Chiswick High Road	Roadside	521084	178499	NO_2	Y	1	2	Y	3
CRAN A	Cranford Avenue Park	Background	510373	177199	NO_2	Y	20	N/A	Y	3
CRAN B	Cranford Avenue Park	Background	510373	177199	NO_2	Y	20	N/A	Y	3
CRAN C	Cranford Avenue Park	Background	510373	177199	NO_2	Y	20	N/A	Y	3
FELT A	Feltham High St / Hanworth Rd Jct	Roadside	510691	173247	NO_2	Y	1	1.5	Y	1.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
FELT B	Feltham High St / Hanworth Rd Jct	Roadside	510691	173247	NO_2	Y	1	1.5	Y	1.5
FELT C	Feltham High St / Hanworth Rd Jct	Roadside	510691	173247	NO_2	Y	1	1.5	Y	1.5
HAT A	Myrtle Avenue	Background	509334	174997	NO_2	Y	10	11.5	Y	2
HAT B	Myrtle Avenue	Background	509334	174997	NO_2	Y	10	11.5	Y	2
HAT C	Myrtle Avenue	Background	509334	174997	NO_2	Y	10	11.5	Y	2
HEST A	Heston Road	Roadside	513655	176842	NO_2	Y	1	3	Y	1.5
HEST B	Heston Road	Roadside	513655	176842	NO_2	Y	1	3	Y	1.5
HEST C	Heston Road	Roadside	513655	176842	NO_2	Y	1	3	Y	1.5
HS32	24 Adelaide Terrace	Roadside	517551	178186	NO_2	Y	1	10	N	3
HS33	30 Surrey Crescent	Roadside	519452	178314	NO_2	Y	3	7	N	2
HS34	Chiswick School	Intermediate	520876	177164	NO_2	Y	3	15	N	2.5
HS35	Wood Street	Roadside	521220	178069	NO_2	Y	1	2	N	4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HS41	Hanworth Library	Roadside	512103	172506	NO_2	Y	2.5	5	N	2
HS42	High Street, Hounslow	Background	514090	175812	NO_2	Y	2	14	N	3
HS43	Glenhurst Road	Roadside	517436	178044	NO_2	Y	1	0.5	N	2
HS46	Swyncombe Avenue	Roadside	516887	178637	NO_2	Y	1	1	N	2
HS47	Boston Manor Road	Roadside	516712	178588	NO_2	Y	1	1	N	2
HS51	Bedfont Sports Club	Intermediate	509249	174683	NO_2	Y	3	28	N	2
HS52	Bedfont Library	Roadside	508868	173720	NO_2	Y	2	6	N	3
HS53	Church of the Good Shepherd	Intermediate	510986	176031	NO_2	Y	4	25	N	2.5
HS54	Cranford Lane / Cranford High Street Jct.	Roadside	510784	177460	NO_2	Y	2	2	N	2
HS55	Cranford Library	Roadside	510750	176684	NO_2	Y	3	6	N	3
HS61	Twickenham Road	Roadside	516208	175793	NO_2	Y	0	18	N	3
HS62	Sutton Road	Roadside	513619	176924	NO_2	Y	1	1	N	4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HS63	Lampton Road	Roadside	513528	175868	NO_2	Y	1	1	N	2.5
HS64	Junction of Roseheath Road	Roadside	512860	175013	NO_2	Y	2	2	N	5
HS65	Eastbourne Road, Uxbridge Rd Jct	Roadside	511840	172745	NO_2	Y	2	3	N	2
HS66	Brainton Avenue	Roadside	510957	173642	NO_2	Y	1	5	N	2
HS67	Busch Corner	Roadside	516590	176888	NO_2	Y	0	1	N	2.5
HS68	Junction of Commerce Road	Roadside	517278	177298	NO_2	Y	0	2	N	2
HS69	Kew Bridge	Roadside	519015	178018	NO_2	Y	0	0	N	2
HS70	Eastbury Grove (Chiswick Lane)	Roadside	521442	177980	NO_2	Y	1	1	N	2.5
HS71	Gunnersbury Avenue	Roadside	519180	179338	NO_2	Y	2	9	N	2
HS72	Heston Crossroads	Roadside	513064	177552	NO_2	Y	1	2.5	N	3
HS73	Browells Lane, Feltham	Roadside	510567	172857	NO_2	Y	2	4	N	2
HS74	Swift Road, Hanworth	Roadside	511989	171797	NO_2	Y	2	13.5	N	2

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HS76	Clements Court, Hounslow	Background	511572	175015	NO_2	Y	3	N/A	N	4
HS77	Beaversfield Park	Background	512000	175970	NO_2	Y	5	N/A	N	2.5
HS78	Staines / Wellington Road	Roadside	512763	175312	NO_2	Y	1	3	N	4
HS79	Whitton Road	Roadside	513839	175316	NO_2	Y	2	1	N	3
HS80	Hounslow Bus Station	Roadside	514433	175950	NO_2	Y	0	3	N	3
HS81	Woodlands	Intermediate	515035	175907	NO_2	Y	10	2	N	2.5
HS82	Church Street	Roadside	516669	175998	NO_2	Y	0	1	N	2
HS83	Osterley Park	Background	514848	178068	NO_2	Y	2	N/A	N	1
HS84	Apex Corner (York Way)	Roadside	512709	172155	NO_2	Y	1	2	N	3
HS85	Hospital Road	Roadside	513213	175655	NO_2	Y	1	1	N	4
HS86	Jolly Waggoners	Roadside	510947	176564	NO_2	Y	2	1	N	4
HS87A	Henlys Roundabout	Roadside	511542	176426	NO_2	Y	2	1.5	N	4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HS88	Thames Path, Duke's Meadows	Background	521483	176692	NO_2	Y	2	N/A	N	2
HS89	Mogden Sewage Works Gate	Roadside	515424	174719	NO_2	Y	3	3	N	2
HS90	The Butts	Intermediate	517585	177606	NO_2	Y	2	3	N	2
HS91	Hogarth Ln / Dukes Av	Roadside	521041	177973	NO_2	Y	3	8	N	6
HS92	St Mary's School	Intermediate	521110	177970	NO_2	Y	2	13	N	5
HS93	William Hogarth School	Intermediate	521110	177970	NO_2	Y	2	13	N	5
HS94	Hogarth Roundabout	Roadside	521490	177920	NO_2	Y	2	1	N	2
HS95	Bennett Street	Roadside	521525	177953	NO2	Y	2	1	N	2
HS96	Acton Lane / Chiswick High Rd	Roadside	520149	178515	NO2	Y	2	1	N	2
HS97	Acton Lane	Roadside	520371	178589	NO2	Y	2	1	N	2
HS98	Chiswick Park / Bollo Lane	Roadside	520348	178661	NO2	Y	2	1	N	2
HS99	Paxton Road jct A316	Roadside	521240	177679	NO2	Y	2	1	N	2

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

1.2 Comparison of Monitoring Results with AQOs

Table D. Annual Mean NO_2 Monitoring Results: Automatic Monitoring (µg m^{-3})

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period %[(a)]	Valid data capture 2024 %[(b)]	2018	2019	2020	2021	2022	2023	2024
Chiswick	521084	178499	Roadside	94.40	94.40	**47**	**41.7**	32	32.9	31	29	28
Brentford	517425	178071	Roadside	97.09	97.09	**48**	**43.9**	33	35.8	34	33	29
Heston	513655	176842	Roadside	93.18	93.18	**40**	37.7	31	28.8	28	23	22
Hatton Cross	509334	174997	Urban Background	91.29	91.29	28	27.3	17	18.2	20	19	20
Gunnersbury	519180	179338	Roadside	97.47	97.47	**45**	**45**	37	35.9	29	31	28
Feltham	510691	173247	Roadside	88.68	88.68	27	27.7	26	27.8	25	23	25

Notes:

The annual mean concentrations are presented as µg m^{-3}.

Exceedances of the NO_2 annual mean AQO of 40 µg m^{-3} are shown in **bold**.

NO_2 annual means in excess of 60 µg m^{-3}, indicating a potential exceedance of the NO_2 hourly mean AQS objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias.

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Nitrogen Dioxide: Annual mean NO2 levels decreased at four of Hounslow's six automatic monitoring stations from the levels recorded in 2023. Increases were recorded at Feltham and Hatton Cross. This marks the first increase at Feltham's station since 2021, and the first increase at Hatton Cross since 2022. For the fifth consecutive year, all automatic monitoring sites registered an annual mean value of less than the UK limit of 40 micrograms (µg). The highest value recorded for the year was 29 µg at Brentford, a reduction of 4 µg from 2023.

Diffusion tubes (Table E): For the second time in a row, no diffusion tube location in Hounslow recorded a bias-adjusted annual mean concentration higher than the 40 µg limit. The highest annual mean concentration recorded in 2024 was 30.9 µg at Busch Corner (site ID HS67). Of 55 diffusion tube sites monitored in both 2023 and 2024, 39 (70.9%) recorded a decrease in 2024 compared to 2023 levels.

Exceedances (Table F): Chiswick recorded 2 exceedances of the 1-hour mean NO2 limit of 200 µg m-3 while all other stations recorded no exceedances for the 7th consecutive year.

Figure A. Seven Year Trend in Annual Mean NO_2 Concentration, 2018-2024

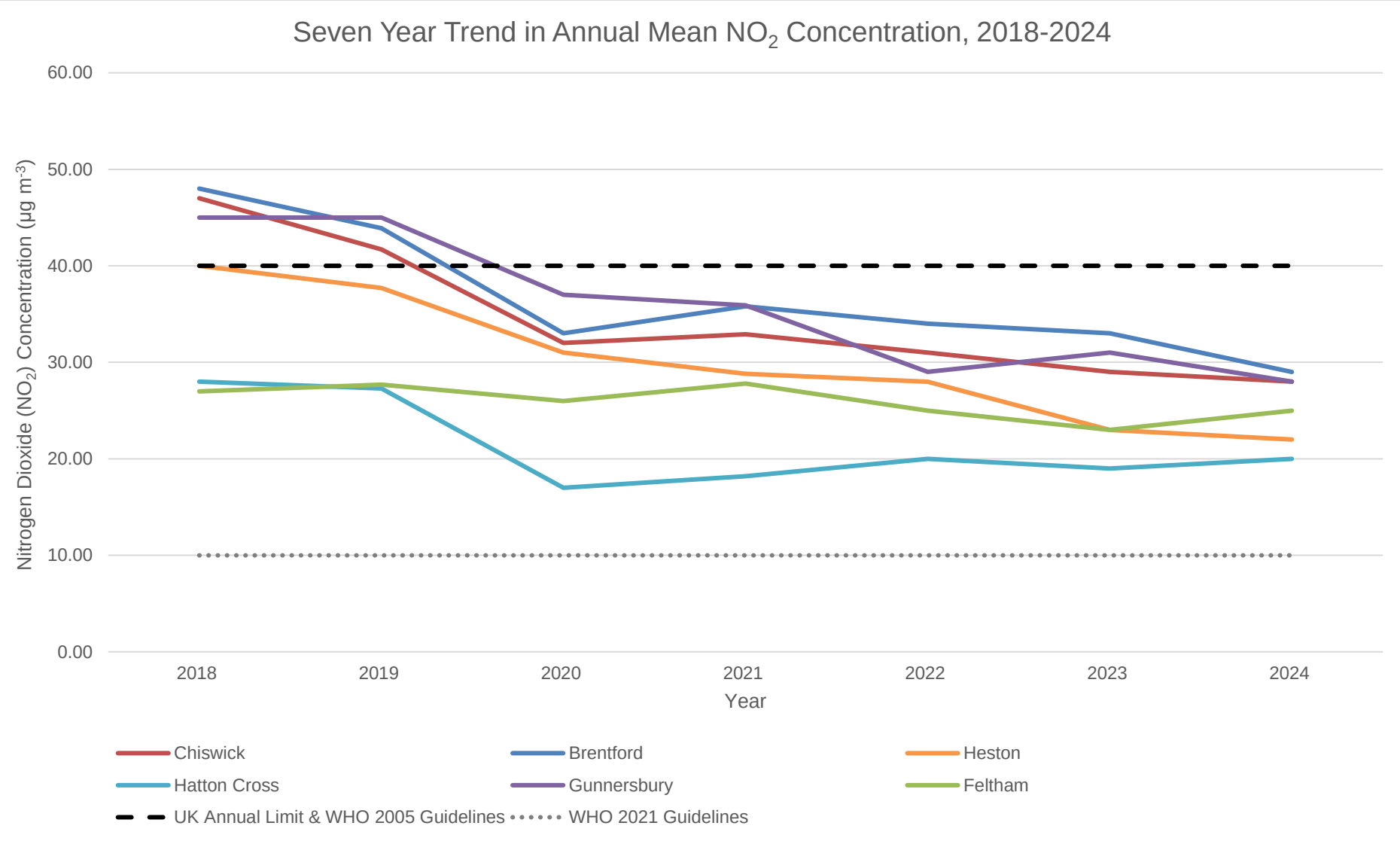


Table E. Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg m^{-3})

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)(1)	Valid Data Capture 2024 (%)(2)	2018	2019	2020	2021	2022	2023	2024
BREN A, B, C	517425	178071	Roadside	100.0	100.0	**48.3**	**44.1**	33.6	38.3	38.9	31.5	27.7
CHIS A, B, C	521084	178499	Roadside	100.0	100.0	**43.9**	**41.8**	31.9	32.2	34.6	29.3	25.4
FELT A, B, C	510691	173247	Roadside	90.6	90.6	25.8	27.8	24.6	25.4	28.6	20.7	18.6
HAT A, B, C	509334	174997	Urb Background	90.6	90.6	29.9	27.2	17.5	21.4	27.0	21.5	20.7
HEST A, B, C	513655	176842	Roadside	100.0	100.0	**43.6**	38.2	29.7	30.0	33.9	23.7	21.2
HS32	517551	178186	Roadside	90.6	90.6	**48.3**	**44.1**	33.6	38.3	38.9	31.5	25.4
HS33	519452	178314	Roadside	75.0	75.0	**43.9**	**41.8**	31.9	32.2	34.6	29.3	23.0
HS34	520876	177164	Urb Background	92.5	92.5	25.8	27.8	24.6	25.4	28.6	20.7	16.4
HS35	521220	178069	Roadside	84.9	84.9	29.9	27.2	17.5	21.4	27.0	21.5	16.6
HS41	512103	172506	Roadside	92.5	92.5	**43.6**	38.2	29.7	30.0	33.9	23.7	21.6
HS42	514090	175812	Urban Centre	75.0	75.0	**43.2**	**43.7**	35.5	33.0	32.5	29.4	20.2
HS43	517436	178044	Roadside	100.0	100.0	**42.5**	38.9	30.2	31.1	28.9	26.6	19.0
HS46	516887	178637	Roadside	56.6	56.6	25.8	25.9	20.0	21.3	18.7	17.8	14.9
HS47	516712	178588	Roadside	90.6	90.6	27.3	26.4	19.9	19.3	18.5	16.6	25.3
HS51	509249	174683	Urb Background	90.6	90.6	**41.7**	**40.2**	33.9	29.8	31.9	23.9	14.5
HS52	508868	173720	Roadside	100.0	100.0	28.3	27.3	22.8	25.5	27.0	23.3	14.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)([1])	Valid Data Capture 2024 (%)([2])	2018	2019	2020	2021	2022	2023	2024
HS53	510986	176031	Urb Background	100.0	100.0	33.2	30.6	22.8	25.5	23.9	21.3	17.6
HS54	510784	177460	Roadside	92.5	92.5					20.6	19.6	22.9
HS55	510750	176684	Roadside	75.0	75.0				33.1	33.9	24.7	23.2
HS61	516208	175793	Roadside	81.1	81.1	25.5	24.1	16.3	17.1	20.1	16.7	16.7
HS62	513619	176924	Roadside	100.0	100.0	23.3	23.0	16.9	19.2	18.3	15.5	18.3
HS63	513528	175868	Roadside	84.9	84.9	25.6	28.0	18.7	20.5	21.1	18.7	21.5
HS64	512860	175013	Roadside	100.0	100.0	35.0	38.4	28.5	29.5	27.8	25.1	16.1
HS65	511840	172745	Roadside	100.0	100.0	33.7	33.9	23.7	27.3	26.9	23.0	13.9
HS66	510957	173642	Roadside	100.0	100.0	32.1	31.4	21.4	23.4	22.5	19.5	21.7
HS67	516590	176888	Roadside	100.0	100.0	33.5	33.6	23.0	24.9	23.5	20.6	30.9
HS68	517278	177298	Roadside	100.0	100.0	34.1	30.9	24.6	27.1	28.2	22.6	24.6
HS69	519015	178018	Roadside	58.5	58.5	28.7	27.1	20.1	20.6	21.4	17.5	21.3
HS70	521442	177980	Roadside	83.0	83.0	25.0	25.1	18.7	19.2	19.6	16.5	27.2
HS71	519180	179338	Roadside	100.0	100.0	37.9	34.3	26.0	27.4	23.0	21.8	22.4
HS72	513064	177552	Roadside	83.0	83.0	**48.4**	**50.0**	**40.5**	**44.1**	**44.9**	38.3	19.0
HS73	510567	172857	Roadside	100.0	100.0	36.5	36.6	30.8	36.3	32.6	28.5	16.7
HS74	511989	171797	Roadside	90.6	90.6	39.0	36.0	26.5	28.8	23.9	24.2	14.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)([1])	Valid Data Capture 2024 (%)([2])	2018	2019	2020	2021	2022	2023	2024
HS78	512763	175312	Roadside	92.5	92.5	**47.2**	**44.1**	30.5	36.5	31.5	29.6	23.8
HS79	513839	175316	Roadside	100.0	100.0	37.8	36.6	29.1	28.7	27.7	25.2	16.1
HS80	514433	175950	Roadside	66.0	66.0	36.1	35.0	26.1	25.5	25.5	22.3	28.5
HS81	515035	175907	Urb Background	75.0	75.0	25.3	29.1	21.4	22.6	22.0	18.4	12.5
HS82	516669	175998	Roadside	92.5	92.5	30.9	29.2	21.7	23.2	20.2	17.1	11.6
HS83	514848	178068	Urb Background	83.0	83.0	**42.7**	**40.7**	32.7	38.2	32.6	28.0	10.2
HS84	512709	172155	Roadside	83.0	83.0	30.1	30.5	22.0	23.2	23.1	21.3	18.8
HS85	513213	175655	Roadside	100.0	100.0	**58.7**	**46.4**	36.7	**45.7**	**40.0**	28.9	24.1
HS86	510947	176564	Roadside	100.0	100.0	22.0	20.2	15.4	15.7	15.5	12.8	23.7
HS87A	511542	176426	Roadside	92.5	92.5	22.2	20.2	15.6	16.7	14.4	11.6	24.9
HS88	521483	176692	Urb Background	58.5	58.5	19.9	18.4	14.0	12.7	13.5	11.7	11.6
HS89	515424	174719	Roadside	100.0	100.0	31.6	33.4	24.6	27.3	25.0	21.6	15.1
HS90	517585	177606	Urb Background	92.5	92.5	37.9	37.5	30.4	31.5	29.0	25.4	15.6
HS91	521041	177973	Roadside	60.4	60.4	**41.3**	**43.5**	30.1	31.7	30.1	25.3	25.1
HS92	521110	177970	Urb Background	84.9	84.9	**44.7**	**47.3**	31.5	33.5	31.9	29.4	21.0
HS93	521110	177970	Urb Background	84.9	84.9	20.7	22.0	16.1	15.6	15.4	14.2	20.1
HS94	521490	177920	Roadside	90.6	90.6	28.8	27.4	22.5	21.9	20.2	17.2	27.0
HS95	521525	177953	Roadside	90.6	90.6	25.3	24.7	20.4	20.6	19.8	17.9	19.4

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%)(1)	Valid Data Capture 2024 (%)(2)	2018	2019	2020	2021	2022	2023	2024
HS96	520149	178515	Roadside	100.0	100.0	**45.0**	**43.7**	30.5	32.7	31.0	25.5	24.2
HS97	570371	178589	Roadside	92.5	92.5	**56.3**	34.8	26.1	26.3	23.4	21.8	20.2
HS98	520348	178661	Roadside	100.0	100.0	**56.3**	36.2	25.5	25.2	22.2	21.8	19.9
HS99	521240	177679	Roadside	92.5	92.5	-	-	-	**41.4**	35.6	29.9	21.8

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19**

☒ **Diffusion tube data has been bias adjusted.**

☒ **Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.**

Notes:

The annual mean concentrations are presented as µg m^{-3}.

Exceedances of the NO_2 annual mean objective of 40µg m^{-3} are shown in **bold**.

NO_2 annual means exceeding 60µg m^{-3}, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been “annualised” in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%)

Table F. NO_2 Automatic Monitoring Results: Comparison with 1-hour Mean Objective, Number of 1-Hour Means > 200 µg m^{-3}

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period %(a)	Valid data capture 2024 %(b)	2018	2019	2020	2021	2022	2023	2024
Chiswick	521084	178499	Roadside	94.40	94.40	0	0	0	0	0	0	2
Brentford	517425	178071	Roadside	97.09	97.09	0	0	0	0	0	0	0
Heston	513655	176842	Roadside	93.18	93.18	0	0	0	0	0	0	0
Hatton Cross	509334	174997	Urban Background	91.29	91.29	0	0	0	0	0	0	0
Gunnersbury	519180	179338	Roadside	97.47	97.47	0	0	0	0	0	0	0
Feltham	510691	173247	Roadside	88.68	88.68	0	0	0	0	0	0	0

Notes

Results are presented as the number of 1-hour periods where concentrations greater than 200 µg m^{-3} have been recorded.

Exceedance of the NO_2 short term AQO of 200 µg m^{-3} over the permitted 18 hours per year are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table G. Annual Mean PM_{10} Automatic Monitoring Results (µg m^{-3})

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period %([a])	Valid data capture 2024 %([b])	2018	2019	2020	2021	2022	2023	2024
Chiswick	521084	178499	Roadside	92.61	92.61	20	20	21	16	19	20	21
Brentford	517425	178071	Roadside	88.13	88.13	26	22	25	21	23	25	26
Heston	513655	176842	Roadside	84.73	84.73	22	24	23	17	21	20	20
Hatton Cross	509334	174997	Urban Background	81.81	81.81	21	20	18	19	23	20	22
Gunnersbury	519180	179338	Roadside	93.80	93.80	22	20	22	21	22	29	28
Feltham	510691	173247	Roadside	95.82	95.82	20	20	21	16	18	18	18

Notes

The annual mean concentrations are presented as µg m^{-3}.

Exceedances of the PM_{10} annual mean AQO of 40 µg m^{-3} are shown in **bold**.

All means have been "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Particulate Matter: Three of Hounslow's automatic monitoring stations recorded an increase in particulate matter (PM_{10}) from 2023 to 2024, two sites remained static, and one site saw a decrease. This represents a slight change from 2023 where two sites saw a decrease from 2022 levels.

Figure B. Seven Year Trend in Annual Mean PM_{10} Concentration, 2018-2024

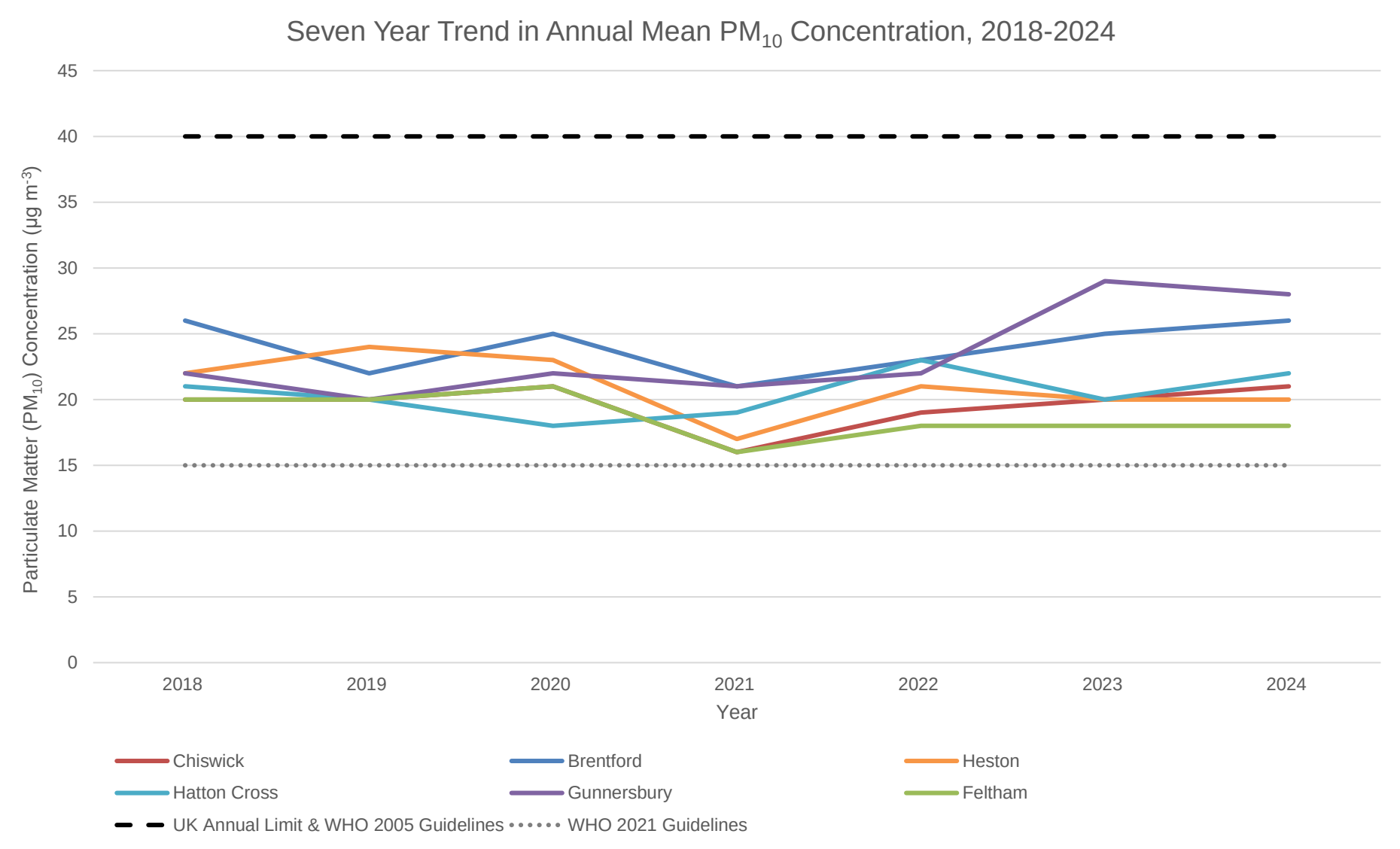


Table H. PM_{10} Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM_{10} 24-Hour Means > 50 µg m^{-3}

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period %[(a)]	Valid data capture 2024 %[(b)]	2018	2019	2020	2021	2022	2023	2024
Chiswick	521084	178499	Roadside	92.61	92.61	1	3	3	0	3	5	2
Brentford	517425	178071	Roadside	88.13	88.13	4	8	9	3	5	10	6
Heston	513655	176842	Roadside	84.73	84.73	2	5	4	0	5	2	0
Hatton Cross	509334	174997	Urban Background	81.81	81.81	2	7	4	2	2	1	0
Gunnersbury	519180	179338	Roadside	93.80	93.80	1	5	2	2	5	16	2
Feltham	510691	173247	Roadside	95.82	95.82	4	7	2	0	3	2	0

Notes

Exceedances of the PM_{10} 24-hour mean objective (50 µg m^{-3} over the permitted 35 days per year) are shown in **bold.**

Where the period of valid data is less than 85% of a full year, the 90.4th percentile is provided in brackets.

(a) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

(b) data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Table I. Annual Mean $PM_{2.5}$ Automatic Monitoring Results (µg m^{-3})

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid data capture for monitoring period %[(a)]	Valid data capture 2024 %[(b)]	2018	2019	2020	2021	2022	2023	2024
Chiswick	521084	178499	Roadside	90.60	90.60	14	13	10	10	12	9	13
Brentford	517425	178071	Roadside	88.78	88.78	15	13	12	10	10	9	11
Heston	513655	176842	Roadside	82.39	28.78	0	0	0	0	0	0	18
Hatton Cross	509334	174997	Urban Background	85.15	14.88	0	0	0	0	0	0	19
Gunnersbury	519180	179338	Roadside	93.11	17.37	0	0	0	0	0	0	18
Feltham	510691	173247	Roadside	95.34	32.28	0	0	0	0	0	0	14

Notes

The annual mean concentrations are presented as µg m^{-3}.

Exceedances of the $PM_{2.5}$ annual mean AQO of 20 µg m^{-3} are shown in **bold**.

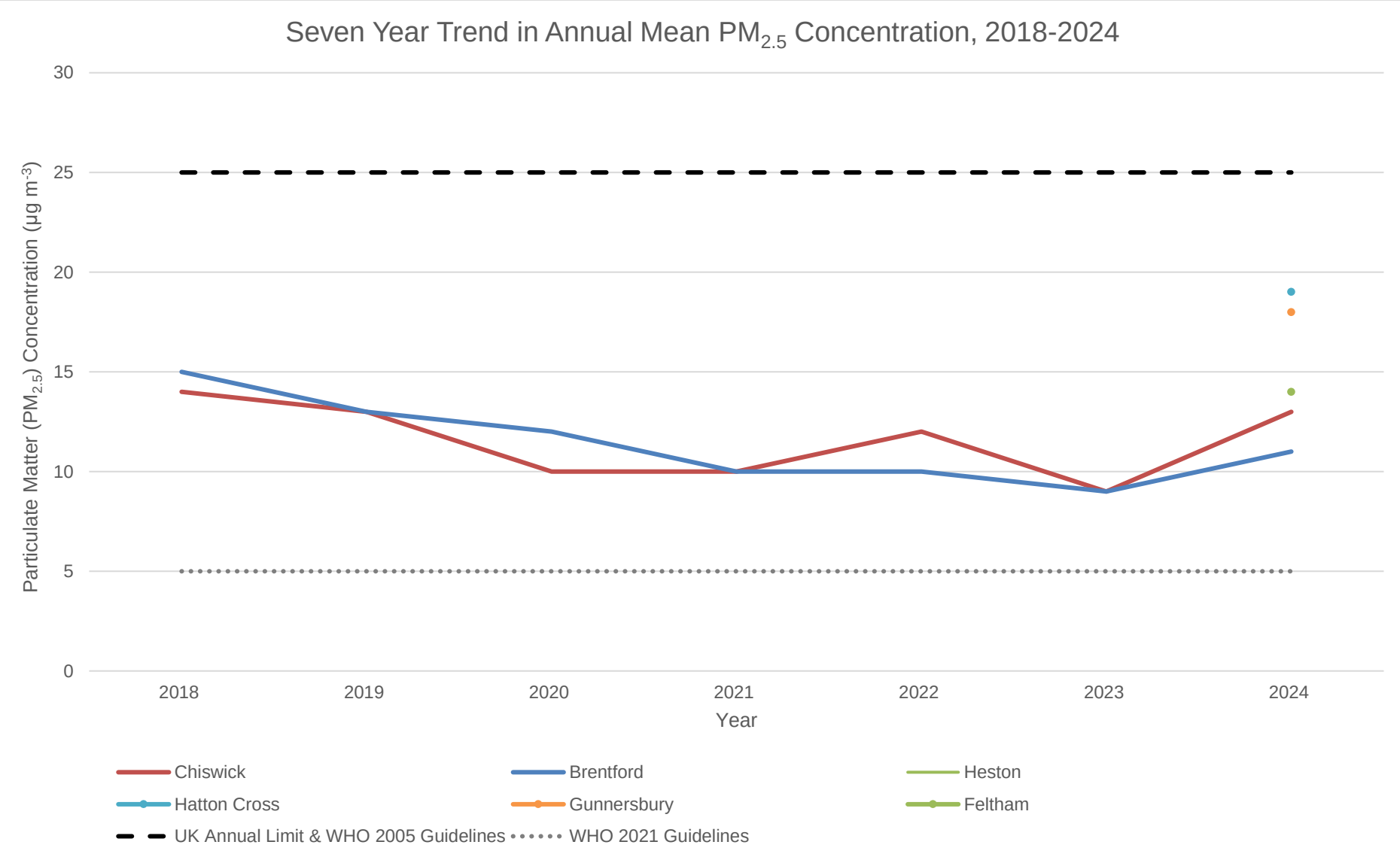
All means have been "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

Particulate Matter ($PM_{2.5}$): 2024 is the first year $PM_{2.5}$ has been monitored across all six automatic monitoring sites. At Chiswick and Brentford, where $PM_{2.5}$ has been recorded since 2017 we saw an increase in $PM_{2.5}$ for the first time since 2022. All six sites are recording levels under the existing UK annual limit value of 25 µg m^{-3}. The WHO's guideline figure for PM2.5 is 5 µg.

Figure C. Seven Year Trend in Annual Mean $PM_{2.5}$ Concentration, 2018-2024



2. Action to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

London Borough of Hounslow currently does not have any declared AQMAs. A local Air Quality Strategy is in place to prevent and reduce polluting activities. The Hounslow Air Quality Action Plan 2023-2028 is available here.

2.2 Air Quality Action Plan Progress

Table K provides a brief summary of LB Hounslow's progress against the Air Quality Action Plan, showing progress made this year. New projects which commenced in 2024 are shown at the bottom of the table.

Table J. Delivery of Air Quality Action Plan Measures

Measure	LLAQM Action Matrix Theme	Action	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
1	Monitoring and core statutory duties	Maintain and upgrade Hounslow's automatic air quality monitoring stations.	Maintenance is ongoing; we have expanded our $PM_{2.5}$ monitoring from 2 to 6 sites, and we have installed new NOX monitors at 4 sites. We have replaced PM_{10} monitors at all 6 sites.
2	Monitoring and core statutory duties	Maintain Hounslow's nitrogen dioxide (NO2) diffusion tube network in accordance with current guidance.	Maintenance is ongoing and in line with current guidance.

Measure	LLAQM Action Matrix Theme	Action	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
6	Monitoring and core statutory duties	Review Hounslow's Air Quality Management Area and Air Quality Focus Areas to understand if any changes are necessary.	Both areas have been assessed and there are no plans change either of them. They will continue to be reviewed on an ongoing basis.
8	Monitoring and core statutory duties	Support the introduction of a new or revised Clean Air Act that improves public protection from atmospheric pollution.	We are currently in line with the UK's legal national limit, and we are working towards the WHOs levels.
10	Monitoring and core statutory duties	Implement a new network of low-cost sensors in line with best practice and technical guidance on the use of such units. Information from this monitoring should be easily accessible to the public, and available in real-time.	Over 75 sensors (of a proposed total of 90) have been installed, predominantly at schools, to provide hyper-local real time data to schools and residents.
13	Monitoring and core statutory duties	Work with the relevant teams (Planning, Public Health, Transport) to ensure the council have a robust air quality evidence base which can be easily adapted into future Plans and Strategies in preparation for future policy changes – e.g. future Local Planning policy, Minimum Energy Efficiency Standards, Air Quality Focus Areas.	We engage with teams across the council to ensure air quality is included as a consideration in all emerging strategies. E.g. the walking and wheeling strategy and kerb side strategy.
15	Emissions from developments and buildings	Continue to bid for funding to decarbonise the council's estate through schemes such as Public Sector Decarbonisation Scheme, Social Housing Decarbonisation Fund, as/when funding becomes available.	We are currently pending funding from the Mayoral Renewables Fund.
19	Emissions from developments and buildings	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT and RE:NEW and through Hounslow's carbon offset fund.	Emerging policy approaches being pursued to expand the COF to help promote retrofitting projects.
21	Emissions from developments and buildings	Deliver the actions and objectives set out in the council's Energy Services Plan, detailing	Council is actively replacing gas-fired boilers with air source heat pumps and installing solar P.V./LED lights on council owned assets and state-funded schools. We are on track to meet our Hounslow

Measure	LLAQM Action Matrix Theme	Action	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
		how the council will reduce its own direct emissions and electrify its energy supply.	Energy Service Plan. We have implemented A.I. technology (provided by Danish company ENTO) to analyse energy waste in corporate assets and state-funded schools to reduce carbon emissions and energy waste.
25	Emissions from developments and buildings	Develop and implement strategies for decentralised energy that convert gas heating to low and zero carbon alternatives including heat networks, and upgrade existing large, combined heat and power communal heating to cleaner technology alternatives. Work with key stakeholders such as Canals & Rivers Trust & Thames Water to capitalise on wasteheat opportunities, reducing dependence on fossil fuels. Reducing emissions from Combined Heat and Power generators (CHP) and enforcing CHP air quality policy in line with London Plan policy SI3. Ensure smaller developments use ultra-low Nox Boilers or other zero carbon low emission options.	Our plan is to introduce stronger requirements for heat networks, subject to examination, helping to increase deployment and reduce carbon.
26	Emissions from developments and buildings	Use planning policy to require residential electric charging points on new developments, in line with Policy EC2 of the Local Plan.	The emerging policy approaches being pursued are trying to align our approach to EV charging point delivery with the London plan.
39	Public health and awareness raising	Encourage schools to join the TfL STARS (Travel for Life) accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme.	This is an ongoing, yearly deliverable. As of September 2024, 35 schools have been accredited. 26 schools have achieved a gold accreditation, 6 Silver and 3 Bronze.

Measure	LLAQM Action Matrix Theme	Action	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
42	Public health and awareness raising	Continue to implement new school streets, including camera enforcement and associated green infrastructure initiatives. Link this work to increased uptake of active travel/ school travel planning.	School streets are an ongoing delivery for the team. As of this year there are 38 schools signed on to the program.
45	Public health and awareness raising	Explore options to introduce air quality issues into schools (via curriculum, eco-schools resources etc).	Air Quality audits are available to every school in the borough; we facilitate school visits and decide on what green intervention would best suit that school. We have wider conversations about air quality and its importance. We are also creating an air quality toolkit which we aim to implement this year, helping schools understand and educate on air quality. We are working with the UCL climate ambassadors to help schools create climate action plans as per DFE guidance. 28 audits have been completed in the past 12 months, with 8 intervention measures either completed or in active progress.
58	Borough fleet actions	Continue to promote the 'Try before you bike' scheme aimed at public/business uptake of cargo bike schemes. Secure funding to deliver this over the plan period.	This is an ongoing deliverable for the council. We have an accompanying offer called Our Bike, which aims to provide residence and businesses with cargo bikes for their own use.
70	Localised solutions	Apply for Mayor's Air Quality Funds and Defra Air Quality Grant to deliver air quality projects in Hounslow as/when funding becomes available.	Hounslow are co-leading the mayor's air quality fund. We have co-funded an anti-idling project with LB Camden.
72	Localised solutions	Engage a consultant to facilitate further investigation into reducing council estate reliance on fossil fuels as part of the Climate Emergency Action Plan.	We commissioned the net carbon zero service; it was successfully completed. We now have a roadmap to net zero for all corporate buildings and schools.
75	Cleaner transport	Work with the Transport Team to help deliver the actions and objectives set out in the adopted Transport Strategies that have the co-benefit of improving air quality.	A new transport strategy was adopted by the council in March 2025 with renewed commitments to air quality and reducing the impact from motor traffic.

Measure	LLAQM Action Matrix Theme	Action	Progress • Emissions/Concentration data • Benefits • Negative impacts / Complaints
77	Cleaner transport	Installation of Ultra-Low Emission Vehicle (ULEV) infrastructure in line with the EV Strategy. The installation of rapid chargers to help enable the take up of electric taxis, cabs and commercial vehicles (in partnership with TfL and/or OLEV94). This action is not related to new development.	This is ongoing. We are working towards installing 2000 charge points by May 2026. Over the next year slow chargers and rapid chargers will be installed with resident priority for usage.
81	Cleaner transport	Work with the transport & traffic teams to co-locate traffic and air quality sensors, to better understand the relationship between traffic and pollution, particularly at key junctions and on strategic roads.	The transport team have recently procured new sensors (approximately 1 per ward) to capture pedestrian and cycle movements as well as car movements.

3. Planning Update and Other New Sources of Emissions

Table K. Planning requirements met by planning applications in LB Hounslow in 2024

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	*30*
Number of planning applications required to undertake construction dust monitoring and reporting (Please specify how you get access to dust monitoring data i.e. online tool or CSV file)	0
Number of CHPs/Biomass boilers refused on air quality grounds	0
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions as detailed in Air Quality Neutral LPG (london.gov.uk) point 3.1.5.	Unknown
Number of developments required to install Ultra-Low NO_X boilers	Unknown
Number of developments where an AQ Neutral building and/or transport assessments undertaken	Unknown
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	0
Number of planning applications with S106 agreements including other requirements to improve air quality	Unknown
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: Central Activity Zone, Canary Wharf and Opportunity Areas Number of planning applications with conditions related to NRMM included. Number of developments registered at www.nrmm.london. Number of audits (based on the pan-London project report and / or inhouse auditing programme) % of sites unregistered prior to audit % of sites compliant with Stage IV of the Directive and/or exemptions to the policy.	N/A
NRMM: Greater London (excluding Central Activity Zone, Canary Wharf and Opportunity Areas) Number of planning applications with conditions related to NRMM included. Number of developments registered at www.nrmm.london. Number of audits (based on the pan-London project report and / or inhouse auditing programme) % of sites unregistered prior to audit % of sites compliant with Stage IIIB of the Directive and/or exemptions to the policy.	Total 14 audits undertaken by Clean Construction for London 2 achieved self-compliance 8 achieved compliance 2 sites recorded non-compliant 0 had no NRMM 2 sites were complete

3.1 New or significantly changed industrial or other sources

No new sources identified.

4. Additional Activities to Improve Air Quality

4.1 London Borough of Hounslow Fleet

The London Borough of Hounslow fleet included one owned and one hired zero-emission vehicle, representing 0.6% of the total fleet of 340 vehicles.

4.2 Planning Enforcement

All major planning applications with issues of air quality or noise, including environmental statements and CEMPs, are reviewed on Hounslow's behalf by an external consultant, Tetra Tech Ltd.

4.3 Pan-London NRMM Auditing Project

Hounslow continues to support the NRMM Enforcement Project. Details in Table N. The recommended NRMM condition wording from Cleaner Construction for London is as follows:

> *All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards as published on the NRMM Website (https://nrmm.london/).*
>
> *Unless it complies with the standards set out on the website, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority.*
>
> *The developer shall keep an up to date list of all NRMM used during the demolition, site preparation and construction phases of the development on the online register at https://nrmm.london/.*

Major applications in Hounslow are required to submit either a Construction or Demolition Management Plan or Environmental Management Plan which contains details of on-site NRMM. An LBH NRMM condition isn't used.

4.4 Air Quality Alerts

Hounslow is a member of the CERC airTEXT service (https://www.airtext.info/). Hounslow cascades the mayor's air quality alert messages.

Appendix A Details of Monitoring Site Quality QA/QC

A.1 Automatic Monitoring Sites

- Routine calibrations carried out monthly by LSO from Hounslow Council
- Biannual audits completed by Ricardo-AEA
- Servicing and ad hoc repair visits provided by ESU We Care 4 Air

A.2 Diffusion Tubes

- Gradko International supplied and analysed the diffusion tubes used by the London Borough of Hounslow in 2024
- The preparation method used was 50% TEA in acetone
- Gradko is a UKAS accredited laboratory (2187) with ISO 17025
- Laboratory precision results:
    - Precision: Good (https://laqm.defra.gov.uk/air-quality/air-qualityassessment/precision-and-accuracy/)
    - AIR-PT: 100% (https://laqm.defra.gov.uk/air-quality/air-qualityassessment/qa-qc-framework/)
- National bias adjustment factor from database v03/25: 0.88
- Local bias adjustment factor from five co-location studies: 0.83

Information on QA/QC for diffusion tubes can be found on the LAQM website at https://laqm.defra.gov.uk/annual-reporting/.

Factor from Local Co-location Studies

	STEP 3a Local Bias Adjustment Input 1	STEP 3b Local Bias Adjustment Input 2	STEP 3c Local Bias Adjustment Input 3	STEP 3d Local Bias Adjustment Input 4	STEP 3e Local Bias Adjustment Input 5
Periods used to calculate bias	11	11	11	9	9
Bias Adjustment Factor A	0.8 (0.76 - 0.85)	0.85 (0.81 - 0.89)	0.8 (0.74 - 0.87)	0.71 (0.63 - 0.8)	1.04 (0.92 - 1.19)
Diffusion Tube Bias B	24% (17% - 32%)	17% (12% - 23%)	25% (15% - 35%)	42% (25% - 58%)	-4% (-16% - 8%)
Diffusion Tube Mean (µg/m^{-3})	33.9	30.3	25.1	25.2	23.0
Mean CV (Precision)	3.8%	4.0%	3.8%	6.3%	3.8%
Automatic Mean (µg/m^{-3}) (for periods used to calculate bias)	27.2	25.8	20.1	17.8	23.8
Data Capture (for periods used to calculate bias)	100%	95%	99%	99%	96%
Overall Data Capture	97%	94%	93%	91%	89%
Adjusted Tube Mean (µg/m^{-3})	27 (26 - 29)	26 (25 - 27)	20 (19 - 22)	18 (16 - 20)	24 (21 - 27)
Overall Diffusion Tube Precision	Good Overall Precision	Good Overall Precision	Good Overall Precision	Good Overall Precision	Good Overall Precision
Overall Continuous Monitor Data Capture	Good Overall Data Capture	Good Overall Data Capture	Good Overall Data Capture	Good Overall Data Capture	Poor Overall Data Capture

Discussion of Choice of Factor to Use

Per section 7.193 of LAQM TG.16:

> *"If there is more than one local collocation study, then the A factors should not be averaged. Instead, a reasonable approximation can be derived by averaging the B values. For example, if there were 2 studies of 22% and 28%, then the average would be 25%. This is then expressed as a factor, e.g. 25% is 0.25. Next add 1 to this value, e.g. 0.25 + 1.00 = 1.25. Finally, take the inverse to give the bias adjustment factor, e.g. 1/1.25 = 0.80."*

The local bias adjustment factor was calculated at five co-location studies at automatic monitoring stations across Hounslow. The BAF was calculated using the LAQM Diffusion Tube Data Processing Tool. The average bias adjustment factor of these five studies (from B factor) was 0.83. Details of each co-location study are listed above. The local bias adjustment factor of 0.83 was applied to all single diffusion tube sites, as is consistent with analysis in previous years. The national BAF for 50% TEA in acetone tubes analysed by Gradko in 2023 is 0.88 (Database v03/25).

Table L. Bias Adjustment Factor

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	Local	03/25 (0.88)	0.83
2023	Local	03/24 (0.83)	0.81
2022	Local	03/23 (0.82)	0.85
2021	Local	03/22 (0.84)	0.87
2020	Local	03/21 (0.81)	0.83
2019	Local	03/20 (0.93)	0.89
2018	Local	Unknown	0.87
2017	Local	Unknown	0.89

A.3 Adjustments to the Ratified Monitoring Data

Short-term to Long-term Data Adjustment

Data from 5 diffusion tube sites in Hounslow have been annualised. Annualisation has been completed using the LAQM Diffusion Tube Data Processing Tool in line with the methodology outlined in LLAQM.TG(19).

Distance Adjustment

No diffusion tube sites were adjusted for distance.

Table M. Non-Automatic Monitoring Data Adjustment

Site ID	Annualisation Factor Brentford	Annualisation Factor Gunnersbury	Annualisation Factor Hatton Cross	Annualisation Factor Heston	Average Annualisation Factor	Raw Data Annual Mean (µg m^{-3})	Annualised Annual Mean (µg m^{-3})	Comments
HS46	0.9346	0.9410	0.8879	0.8950	0.9146	19.6	18.0	
HS69	1.0512	1.0278	1.0468	1.0855	1.0528	24.4	25.7	
HS80	0.9782	0.9758	0.9663	0.9951	0.9788	35.2	34.5	
HS88	1.0273	1.0494	1.0709	1.0372	1.0462	13.4	14.0	
HS91	1.0212	0.9828	1.0748	1.0601	1.0347	29.3	30.4	

Appendix B Full Monthly Diffusion Tube Results for 2024

Table M. NO_2 2024 Diffusion Tube Results (µg m^{-3})

Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Comment
BREN A	517425	178071	37.9	35.3	31.3		33.2	33.1	33.8	30.3	34.2	31.5	42.6	29.8			Triplicate site
BREN B	517425	178071	34.4	36.0	34.9	24.6	33.9	32.7	31.6	30.0	36.0	32.1	38.2	31.2	33.5	27.7	Triplicate site
BREN C	517425	178071	34.0	36.0	33.9	32.9	34.7	33.2	34.9	32.1	35.2	34.0	39.3	27.9			Triplicate site
CHIS A	521084	178499		35.0	35.4	28.4	33.2	25.6	28.2	24.7	30.3	32.3	35.7	28.7			Triplicate site
CHIS B	521084	178499	34.6	33.7	33.0	30.5	33.0	25.0	28.4	23.5	29.2	33.3	34.8	23.4	30.6	25.4	Triplicate site
CHIS C	521084	178499		35.2	37.2	28.0	32.5	27.0	28.2	24.9	27.6	31.9	35.8				Triplicate site
FELT A	510691	173247	28.4		23.2	20.7		19.3	19.1		22.4	25.2	29.3	20.8			Triplicate site
FELT B	510691	173247	24.7	22.2	22.8	19.4	20.7	18.7	18.7		24.2	24.5	28.1	21.0	22.5	18.6	Triplicate site
FELT C	510691	173247	27.2	22.0	22.0	17.4	23.3		17.4		22.2		29.6				Triplicate site
HAT A	509334	174997	30.2	23.6	18.0	23.2		18.1	24.0		28.3	25.5	30.1	23.6			Triplicate site
HAT B	509334	174997	28.9	25.4	18.9	23.0	24.1	24.8	24.1		26.9	25.2	35.7	24.6	25.0	20.7	Triplicate site
HAT C	509334	174997	29.4	25.4	20.6	22.2	21.1	23.2	25.0		29.3	23.6	35.2	22.2			Triplicate site
HEST A	513655	176842	30.9	29.5	25.1	23.0	27.1	21.9	18.5	23.1	28.5	31.0	29.6	22.1			Triplicate site
HEST B	513655	176842	30.5	30.0	24.5	22.5	27.0	20.3	19.5	23.8	25.8	31.4	31.1	20.6	25.6	21.2	Triplicate site
HEST C	513655	176842	29.0	30.4	25.1	21.5	24.0	22.3	17.7	21.3	25.6	31.2	32.2	22.2			Triplicate site
HS32	517551	178186	31.6		32.9	27.1	28.2	28.5	31.1	30.4	30.3	36.2	31.2	30.4	30.7	25.4	
HS33	519452	178314	28.8	27.4	24.0	26.6				24.6	29.0	28.1	33.7	27.6	27.8	23.0	
HS34	520876	177164	26.2	21.1	20.6	14.7	17.2	15.1		16.2	19.2	24.7	25.1	17.5	19.8	16.4	
HS35	521220	178069	24.2	22.2	20.2		16.6		15.5	13.1	17.2	23.6	28.4	19.0	20.0	16.6	
HS41	512103	172506	31.9	24.7	27.0		24.6	23.0	23.0	21.1	23.8	30.4	37.3	20.3	26.1	21.6	
HS42	514090	175812	20.0	22.8	27.5	22.7		21.0	28.5		26.9	28.5		21.6	24.4	20.2	
HS43	517436	178044	31.0	24.5	20.5	17.8	20.4	18.6	18.9	17.8	23.7	24.4	32.9	24.8	22.9	19.0	
HS46	516887	178637	22.2	23.5	21.2	12.5					17.4	22.3	18.3		19.6	14.9	
HS47	516712	178588	31.5	29.1	27.4	22.1	29.4	27.6	27.5		36.7	34.6	41.2	29.8	30.6	25.3	
HS51	509249	174683	22.5	17.4	16.1	18.4	19.8	16.7	15.0	16.9	22.6		27.4	0.8	17.6	14.5	
HS52	508868	173720	22.4	16.8	16.1	15.5	17.3	14.5	12.6	12.6	19.1	19.3	26.5	18.3	17.6	14.6	
HS53	510986	176031	26.9	23.6	15.7	16.5	17.1	17.0	16.9	16.7	20.8	29.6	25.4	29.4	21.3	17.6	
HS54	510784	177460	31.8	29.8	30.3	21.8	24.0	27.9	26.2	24.1		26.8	31.9	29.2	27.6	22.9	
HS55	510750	176684	34.0		28.6	21.1		24.2		21.8	28.5	31.6	32.3	29.9	28.0	23.2	
HS61	516208	175793	23.7		16.0	17.9	18.1	17.9	17.5	18.0	19.8		30.3	22.5	20.2	16.7	
HS62	513619	176924	27.2	27.3	21.6	16.4	18.9	17.9	18.9	18.8	20.4	26.1	31.5	20.7	22.2	18.3	
HS63	513528	175868	25.0	28.6	24.0		24.6		24.5	23.9	26.8	32.4	26.2	23.6	25.9	21.5	
HS64	512860	175013	24.7	22.7	20.1	15.8	18.6	13.0	15.8	14.2	19.0	22.0	30.8	16.8	19.5	16.1	
HS65	511840	172745	23.5	19.5	19.2	14.2	15.1	13.0	15.2	13.3	10.1	20.0	22.5	16.1	16.8	13.9	
HS66	510957	173642	34.5	27.3	25.0	23.7	26.5	22.5	18.6	19.8	29.1	27.0	35.6	24.3	26.2	21.7	
HS67	516590	176888	**40.6**	37.9	37.7	37.6	37.0	38.6	35.9	37.2	35.7	39.1	39.7	31.2	37.4	30.9	
HS68	517278	177298	32.9	33.3	28.3	22.9	25.0	28.3	28.2	26.6	29.3	29.3	36.4	35.8	29.7	24.6	
HS69	519015	178018			24.5	22.5	25.2		19.8	19.0			33.8	25.9	24.4	21.3	

HS70	521442	177980	35.1	34.7	36.7	26.9	34.3	29.0		27.2	31.1	36.7	36.9		32.9	27.2	
HS71	519180	179338	29.9	30.4	28.4	24.3	26.2	26.0	23.4	23.0	27.7	29.0	33.0	23.5	27.1	22.4	
HS72	513064	177552	30.6	29.0		18.4		19.2	20.4	17.5	20.8	25.4	25.3	23.4	23.0	19.0	
HS73	510567	172857	26.4	21.0	18.1	16.1	19.4	16.8	17.3	15.2	20.7	23.3	28.0	19.8	20.2	16.7	
HS74	511989	171797	24.3		18.7	14.6	15.4	13.7	15.2	13.6	15.8	22.5	23.2	16.1	17.6	14.5	
HS78	512763	175312	27.3	33.9	30.3	25.9	29.0		28.5	24.5	29.2	31.3	31.2	24.7	28.7	23.8	
HS79	513839	175316	26.7	21.4	19.8	14.7	15.9	14.6	16.0	14.1	20.5	24.1	25.7	19.6	19.4	16.1	
HS80	514433	175950	39.3	34.7	29.4	32.6	34.3			29.1	38.3		**44.0**		35.2	28.5	
HS81	515035	175907	20.5	17.6	14.8	11.2	12.0			11.3	13.9		17.8	16.9	15.1	12.5	
HS82	516669	175998	19.3	14.5	12.6	8.5	11.1		10.5	10.5	12.3	15.4	22.4	16.9	14.0	11.6	
HS83	514848	178068	14.9	14.8	11.8	8.5	10.1		11.7	11.3	10.0		18.2	12.6	12.4	10.2	
HS84	512709	172155	27.6			19.7	20.2	18.5	20.3	16.6	26.6	27.3	29.5	20.2	22.7	18.8	
HS85	513213	175655	29.2	32.0	29.8	28.8	27.6	27.4	27.9	29.2	29.4	29.9	32.3	25.2	29.1	24.1	
HS86	510947	176564	29.3	36.6	25.6	28.4	28.4	30.2	26.4	24.2	28.5	21.0	32.2	33.0	28.7	23.7	
HS87A	511542	176426	32.6	38.5	31.7	27.9	30.1		29.0	30.2	27.7	34.4	30.0	18.1	30.0	24.9	
HS88	521483	176692	20.6			12.1		10.5	8.8	11.4		18.4		12.0	13.4	11.6	
HS89	515424	174719	20.7	18.1	18.1	15.3	16.9	15.1	15.7	14.4	16.6	20.7	26.7	20.0	18.2	15.1	
HS90	517585	177606	21.2	22.2	18.7	14.8	17.0	14.5	16.2	17.2	20.5	24.6		20.4	18.9	15.6	
HS91	521041	177973	30.7	26.9		28.7	29.0	35.1		26.7				28.3	29.3	25.1	
HS92	521110	177970	24.1	32.8		21.1	22.8	22.3		22.3	24.5	33.5	33.5	16.7	25.4	21.0	
HS93	521110	177970	24.3	25.6		19.5	27.9	19.1		19.4	20.8	30.4	31.7	23.7	24.3	20.1	
HS94	521490	177920	**42.0**	12.7	37.0	35.2		**40.7**	36.2	33.0	**43.2**	14.5	38.3	25.6	32.6	27.0	
HS95	521525	177953	27.8	26.8	26.4	18.0		21.1	21.9	20.1	21.9	28.3	27.2	19.0	23.5	19.4	
HS96	520149	178515	32.3	27.4	27.4	25.8	31.9	22.0	27.5	26.0	34.0	34.4	36.7	25.6	29.3	24.2	
HS97	570371	178589	29.5	26.5		18.9	23.4	24.5	24.0	20.7	22.6	30.4	31.1	16.8	24.4	20.2	
HS98	520348	178661	29.6	24.0	27.7	19.6	23.9	21.8	23.1	19.9	24.9	26.6	27.3	19.9	24.0	19.9	
HS99	521240	177679	31.0	31.3	29.0	23.5	23.5		22.9	24.3	23.6	29.6	32.1	18.4	26.3	21.8	

☒ All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table M

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19

☒ Local bias adjustment factor used

☒ National bias adjustment factor used

☒ Where applicable, data has been distance corrected for relevant exposure in the final column

☒ LB Hounslow confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

Notes:
Exceedances of the NO_2 annual mean objective of 40µg m^{-3} are shown in **bold**.
NO_2 annual means exceeding 60µg m^{-3}, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.
See Appendix C for details on bias adjustment and annualisation.

Appendix C Map(s) of Monitoring Locations and AQMAs

Figure D. Map of Non-Automatic Monitoring Sites

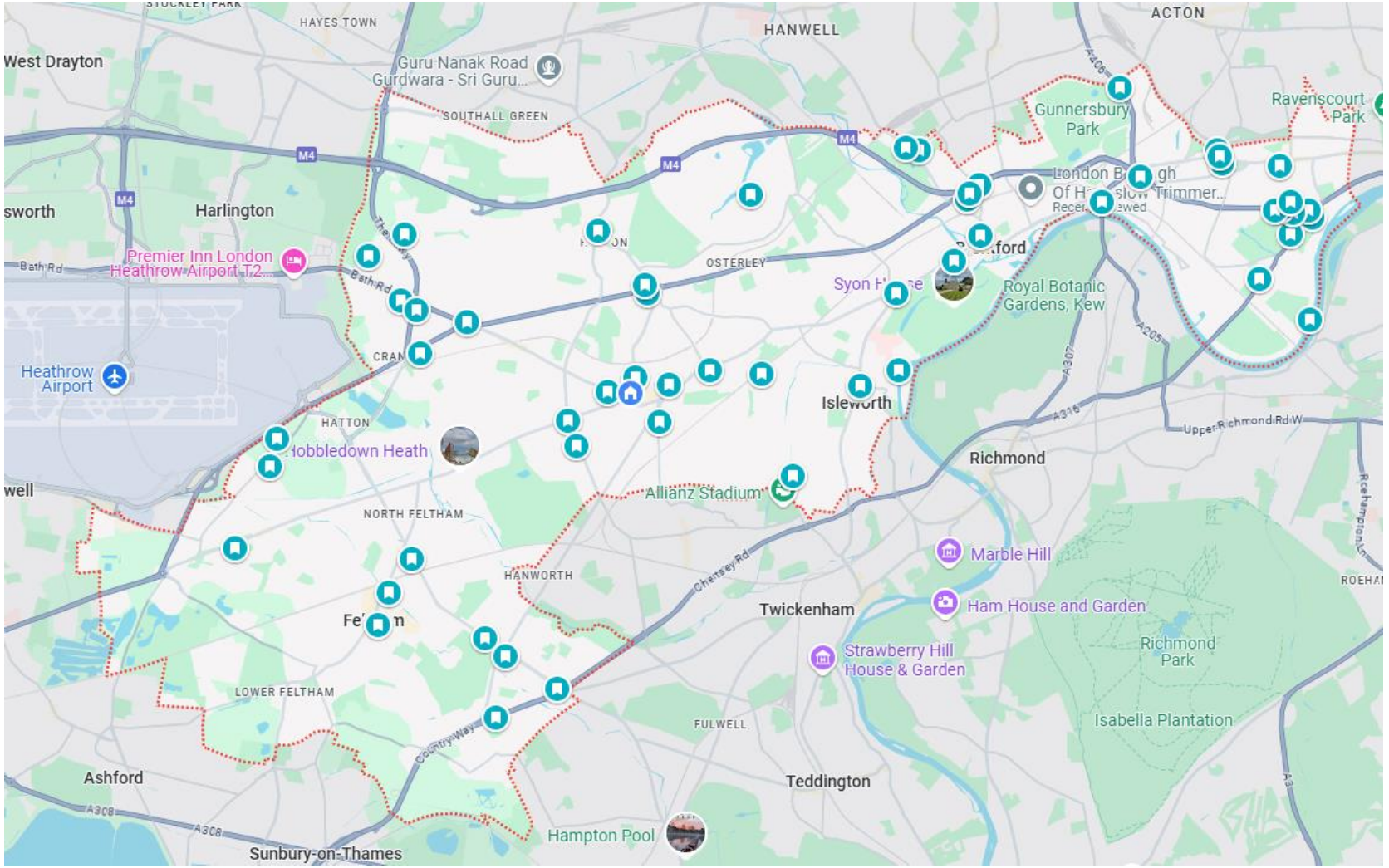


Figure E. Map of Automatic Monitoring Sites